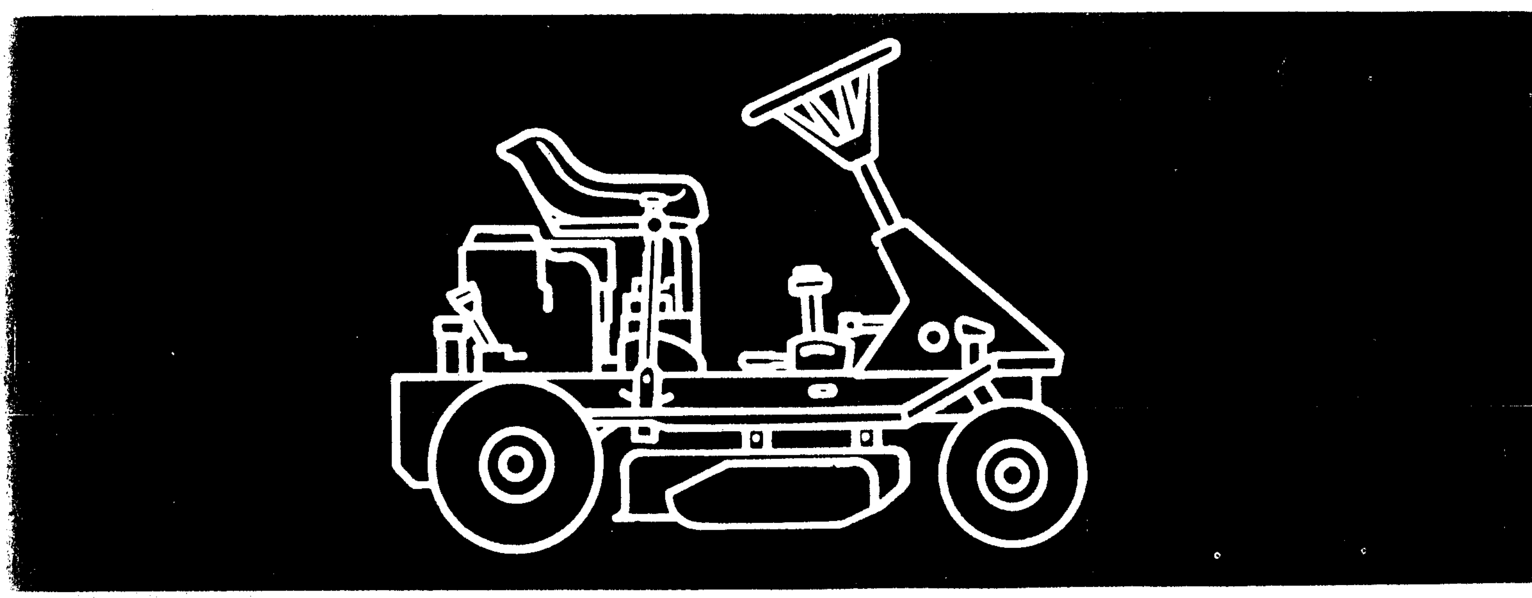
Ariens 912 Series

⚠ SAFETY MESSAGE ⚠

The product for which you have requested information or replacement parts is not a current product. The replacement models incorporate product designs, safety features, safety instructions or warnings which represent the latest "State Of The Art" developments. For your safety and those around you please contact your nearest Ariens/Gravely Dealer for a demonstration of the current product safety provisions and features.

Riding Mower

Owner's Manual



A Message to Ariens Customers . . .

Welcome to the world of Ariens equipment. We are pleased that you have purchased the best equipment available. The care you give your Ariens equipment will determine the satisfaction and service life you will obtain from it. Use this manual, and the engine manual supplied, as your guide. By observing the instructions and suggestions in these manuals, your Ariens equipment will serve you well for many years.

Your Ariens dealer will be happy to supply any service or advice which may be required to keep your Ariens equipment operating at peak efficiency. He stocks genuine Ariens parts and lubricants manufactured with the same precision and skill as the original equipment. His factory trained staff is kept well informed on the best methods of servicing Ariens equipment and is ready and able to serve you. If engine repair or service is required, they can be obtained from an Ariens dealer or from an authorized engine manufacturer's service center. If service is required, be prepared to supply the service person with the Model and Serial Number of the equipment and the engine, as well as a full description of the problem encountered.

NOTE: The descriptions and specifications contained in this manual were in effect at the time the manual was approved for printing. Ariens company reserves the right to discontinue models without notice and without incurring obligation. The equipment described within this manual may not be identified as either standard or optional and the various illustrations may not all be applicable to your particular unit. If you have questions, always check with your Ariens dealer.

Safety Alert Symbol And Notations

The following safety notations are used throughout this manual to call attention to special information or operating procedures. Understand the message in each notation and be alert to unsafe conditions and the possibility of personal injury.

NOTE: A NOTE points out general reference information regarding proper operation and maintenance practices.

IMPORTANT: An **IMPORTANT** statement indicates specific procedures or information that is required to prevent damage to the machine or its attachments.

⚠ **This safety alert symbol is used to attract your attention! PERSONAL SAFETY IS INVOLVED! When you see this symbol - BECOME ALERT - HEED ITS MESSAGE.**

⚠ **CAUTION: A CAUTION identifies safe operating practices or indicates unsafe conditions that could result in personal injury.**

⚠ **WARNING: A WARNING describes a condition where failure to follow the instructions could result in severe personal injury.**

⚠ **DANGER: A DANGER designates a condition where failure to follow instructions or heed warning will most likely result in serious personal injury or death.**

Contents

This manual covers the above models. Specific Model and Serial Number of your riding mower are on a label on frame located near engine. Record numbers below and use them whenever parts or service are required.

Models

Model 912010 (FM26) - 6 H.P.
Tecumseh Recoil w/26" Mower
Serial No. 000101 and up

Model 912011 (FM26e) - 6 H.P.
Tecumseh Electric w/26" Mower
Serial No. 000101 and up.

Model Number - Riding Mower	______________
Serial Number - Riding Mower	______________
Serial Number - Engine	______________

Safety Precautions

Training

Read and understand this Owner's Manual and engine instructions before operating this unit. Be thoroughly familiar with controls and proper use of equipment. Know how to stop unit and disengage controls quickly in an emergency.

Understand and follow each Danger, Warning, Caution and instruction decal installed on equipment.

Use only attachments or accessories designed for your unit. See your Ariens Dealer for a complete list of recommended attachments or accessories.

Keep the area of operation clear of all persons, particularly children and pets.

NEVER allow children to operate equipment. DO NOT allow adults to operate unit without proper instructions.

DO NOT carry passengers.

Preparation

Thoroughly inspect and clear work area of objects which might be picked up and thrown. Remove all stones, sticks, wires, bones and other foreign objects.

Wear sturdy footwear. DO NOT operate riding mower barefoot or when wearing open sandals or canvas shoes. DO NOT wear loose clothing that may get caught in rotating parts of unit.

NEVER attempt to make any adjustments to unit while engine is running (except where specifically recommended).

Gasoline is highly flammable and its vapors are explosive. Handle with care. Use an approved (RED) gasoline container.

NEVER allow smoking materials, sparks or flame (match, pilot light, etc.) near riding mower or gasoline container.

Check fuel supply before starting engine. DO NOT fill gasoline tank indoors, when engine is running, or while engine is still hot. Allow engine to cool several minutes before removing fuel cap. Wipe off any spilled gasoline and allow all vapors to dissipate before starting engine.

Part Number 012318A
Printed in U.S.A. 3-87

Safety Precautions (Continued)

Operation

Keep equipment in good condition. Keep all shields in place and safety devices operating properly.

Operate unit only when there is good visibility and light.

Disengage mower clutch (OUT) and make sure Speed Selector is in neutral (N) position before attempting to start engine.

Open doors if unit is run in garage, exhaust fumes are dangerous. DO NOT run engine in an enclosed area.

Disengage mower clutch when riding mower is being operated in reverse, transported or is not in use.

Look behind and use care when backing. Someone may have come up behind you.

NEVER direct discharge of material toward bystanders nor allow anyone near equipment while unit is in operation.

Tipping and/or loss of control of unit can be caused by; operating on slopes, rough terrain, turns, speed changes, slippery surfaces, and bagger load as well as any combination of them.

Be familiar with area of operation. Stay alert for holes, rocks, roots and hidden hazards in area of operation. Keep away from drop-offs.

Exercise extreme caution when operating on or crossing gravel drives, walks or roads. Stay alert for hazards and traffic.

Reduce speed and exercise extreme caution on slopes and in turns to prevent tipping or loss of control. Be especially cautious when changing direction on slopes and operating on wet or slippery surfaces.

DO NOT stop or start suddenly when going uphill or downhill. Mow up and down face of steep slopes, NEVER across face. If slope is too steep to back riding mower up; slope is too steep for safe operation.

Use care when pulling loads or using grass bagger. Use only approved drawbar hitch points. Limit loads to those you can safely control.

Disengage mower clutch, stop engine, remove key, wait for moving parts to stop before leaving operator's position for any reason such as unclogging discharge chute, when making any repairs, adjustment, inspections or cleaning unit.

DO NOT touch equipment parts which might be hot from operation. Before attempting to maintain, adjust or service allow such parts to cool.

If equipment vibrates abnormally, disengage mower clutch, stop engine at once and remove key. Abnormal vibration is a warning of trouble. Repair any damage before restarting unit.

After striking a foreign object, disengage mower clutch, stop engine and wait for moving parts to stop before leaving operator's position. Thoroughly inspect unit for any damage and repair damage before restarting and operating unit.

Take all possible precautions when leaving unit unattended. Disengage mower clutch, lower attachment, engage parking brake, stop engine and remove key to prevent unauthorized use.

Maintenance and Storage

DO NOT change engine governor setting or over speed engine.

Keep all nuts, bolts and screws tight and be sure equipment is in safe working condition. Check all hardware at regular intervals.

To reduce fire hazard and overheating, keep equipment free of grass, leaves, debris or excessive grease.

Worn out mufflers are more than just a noise nuisance and should be replaced immediately. Continued use could result in fire or explosion.

NEVER store equipment with gasoline in tank inside a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.

Refer to Storage Section of this Owner's Manual for important instructions if unit is to be stored for extended periods.

Decals

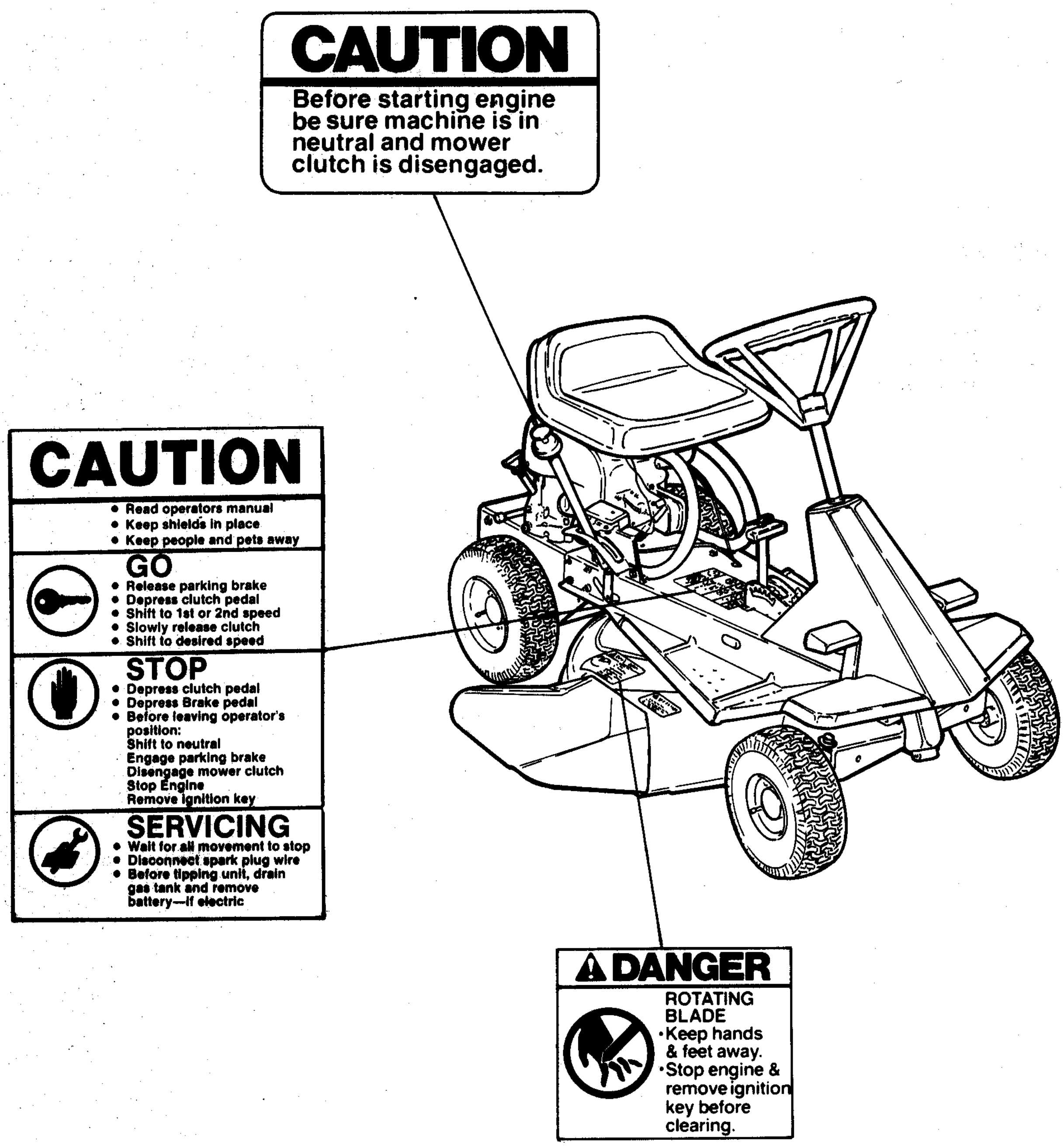


Figure 1: Decal Location

Dealer Preparation for Operation

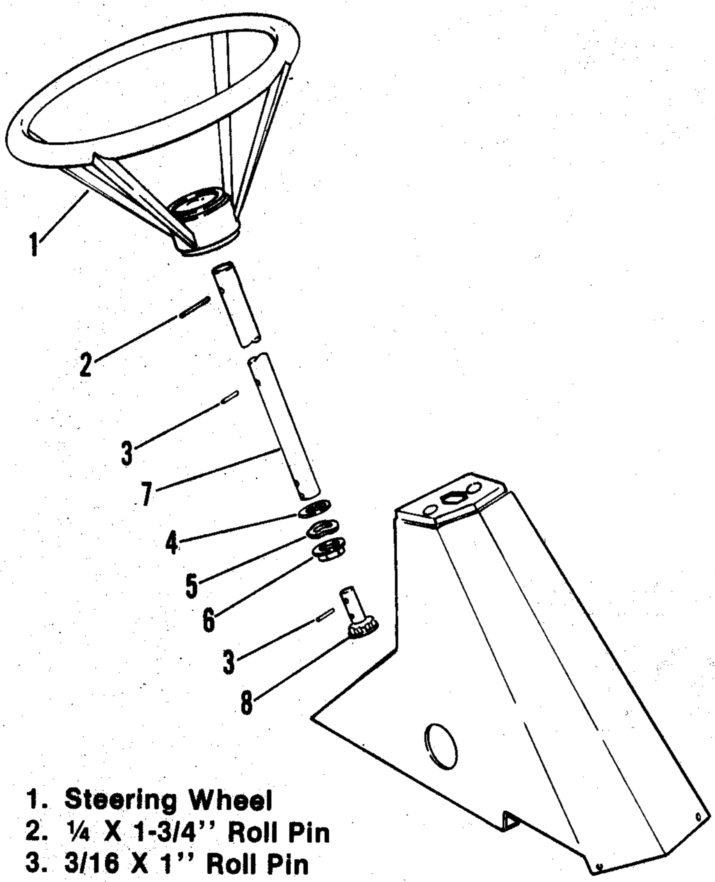
Customer Note: Your Ariens Dealer is expected to complete these preparation steps and review important information, including this manual, with you before or upon delivery of this unit.

The preparation information is included here so that you and your dealer may review it together.

NOTE: All references to "Left", "Right", "Front" and "Rear" are given from operator's position.

Steering Wheel

Lubricate column shaft and place steering wheel onto it; with holes lined up, drive the ¼ X 1-3/4" roll pin through holes to secure. (Pin should have equal spacing on both sides of steering wheel base.)



1. **Steering Wheel**
2. **¼ X 1-3/4" Roll Pin**
3. **3/16 X 1" Roll Pin**
4. **Washer**
5. **Wave Washer**
6. **Flanged Bushing**
7. **Column Shaft**
8. **Steering Pinion**

Figure 2: Steering Wheel and Shaft

Place washer, wave washer and flanged bushing on column shaft and column shaft into steering column. Position bottom end of shaft on steering pinion, line up holes and secure with two 3/16 X 1" roll pins.

Trap washer, wave washer and flanged bushing on top of column by driving the 3/16 X 1" roll pin through hole in column shaft above washer.

Install plug on right hand side of steering column.

Seat

Place seat on seat bracket and install cap screw, lock washer and seat support washer. Connect seat switch wires to connectors. Slide seat to a safe comfortable operating position and tighten cap screw to secure seat in position.

Engine

IMPORTANT: Engine is shipped without oil in crankcase. Refer to instructions in Lubrication and Maintenance Section to fill.

Battery (electric start models)

Battery is shipped without electrolyte. After removing battery from tractor, fill each cell with electrolyte to level indicator. Instructions for battery removal and charging are in Lubrication and Maintenance section of this manual.

Tire Pressure

Riding mower was shipped with tires over inflated to ensure seating of bead. Reduce tire pressure to 12 PSI before operating unit.

Wheel Brakes

Wheel brakes are properly adjusted at factory. Test brakes after riding mower is assembled to be sure adjustment has not been disturbed in shipment. Refer to Adjustments Section of this manual.

Dealer Preparation for Operation (Continued)

Mower Belt

Mower belt tends to "seat-in" during first few hours of operation. Ariens recommends adjustment of belt tension after first five hours of operation. Refer to Adjustments Section of this manual.

Safety Interlock System

DANGER: Failure of interlock, together with improper operation of unit, could result in severe personal injury.

Check the safety interlock system to make sure that it is functioning properly. Tractor must not start unless Speed Selector is in neutral (N) and Mower Clutch is disengaged (OUT). Engine MUST stop if operator leaves seat when Speed Selector is in any drive position or with Mower Clutch engaged (IN). Refer to Repair Manual for adjustment or correction of improper interlock function.

Registration

Complete Riding Mower Warranty Registration Form and mail original copy to Ariens Company.

Warranty is registered under model and serial number found on plate attached to frame near engine.

Delivery

Using the Owner's Manual instruct the customer on controls and operation of unit. Emphasize safety and discuss the Safety Precautions.

IMPORTANT: Remind customer to change oil in engine crankcase after first two (2) hours and adjust mower belt after five hours of operation.

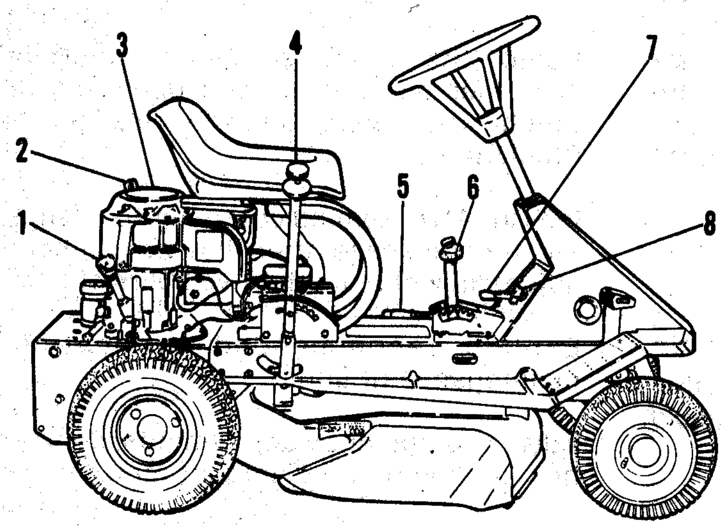
Explain recommended lubrication and maintenance of unit.

Advise customer on adjustments, demonstrate how to mount and dismount mower.

Explain Ariens Company, Limited Warranty Policy, fill out Original Purchaser Registration Card, Parts and Repair Manuals order form and return to Ariens Company. Place Model and Serial Number on page (1) of this manual.

Give customer his Owner's Manual and engine manufacturer instructions. Advise him to thoroughly read and understand them.

Control and Features



1. Dipstick and Engine Oil Fill
2. Rewind Starter
3. Fuel Tank Fill
4. Speed Selector
5. Mower Clutch Lever
6. Mower Height Lever
7. Throttle/Choke Control
8. Ignition/Key Switch
9. Clutch Pedal
10. Brake Pedal
11. Parking Brake Latch

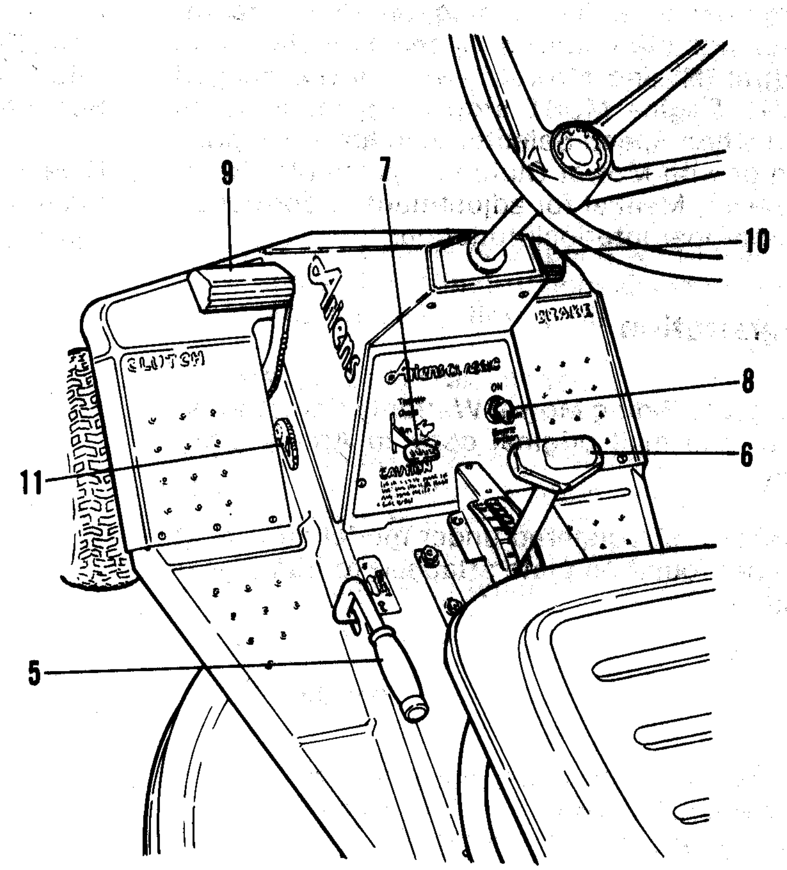


Figure 3. Control and Feature Locations

Operation

PRE-STARTING

Check that engine crankcase oil is at proper level using dipstick. Fill or change per instructions in Lubrication and Maintenance Section.

CAUTION: Make sure all hardware is tight, all safety devices in place and all adjustments made correctly.

Check air filter for dirt. Clean as required. Refer to Lubrication and Maintenance Section.

Fuel

WARNING: Gasoline is highly flammable and must be handled with care. Never fill tank when the engine is running or hot from operation, allow engine to cool several minutes before removing fuel cap. DO NOT allow open flame, matches or smoking in area. DO NOT over fill. Wipe up any spills and allow all vapors to dissipate before starting engine. Use approved (RED) gasoline container.

NOTE: To prevent foreign particles from entering tank while filling; wipe dust, dirt and debris from around cap before removing it.

Check fuel supply. Fill gasoline tank with clean, fresh low lead or lead free gasoline (leaded if unleaded is unavailable). DO NOT use premium, gasahol or mix gasoline with oil. Use of lead free gasoline produces fewer combustion deposits.

Seat

Be sure all controls can be reached safely from operator's position. To adjust seat, loosen cap screw under seat, move seat to desired position and tighten cap screw.

The seat interlock switch is actuated by the operator's weight. If operator leaves seat when Speed Selector is not in neutral (N) or Mower Clutch is engaged (IN) engine must shut off or interlock circuit is defective.

NOTE: Check interlock system before each day's usage.

DANGER: Failure of interlock, together with improper operation of unit, could result in severe personal injury.

STARTING

WARNING: DO NOT attempt to start your engine at this time. Familiarize yourself with controls to see what they do and how they work and thoroughly read and understand entire Operator's Manual first.

Engine will not start unless Speed Selector is in neutral (N) and Mower Clutch Lever is disengaged (OUT). (On electric start models, engine will crank but will not start with controls in other positions.)

On electric start models, depress both Brake and Clutch Pedals when starting engine.

Throttle/Choke

Move Throttle Lever to Choke position to start a cold engine. When engine has warmed up, move lever to Fast position. (It should not be necessary to use choke when starting a warm engine.)

CAUTION: Idle speed of engine and top governed engine speed are factory adjusted. DO NOT change engine governor setting or over speed engine.

Throttle Lever controls engine speed (to increase push up and to decrease pull down).

When mowing, engine should be operated at full throttle unless otherwise specified in this manual. Select desired travel speeds with Speed Selector.

Rewind Starter

Grasp starter handle and pull rope out slowly until it pulls harder, this is the compression stroke, let rope rewind slowly. Then pull rope with rapid continuous full arm stroke. Let rope rewind slowly.

IMPORTANT: DO NOT let starter rope snap back against starter.

Repeat above instructions until engine starts. (Refer to engine manufacturer's instructions.)

Ignition Switch

WARNING: Turn ignition Key (OFF) and remove it before attempting any maintenance, adjustment or leaving unit unattended.

On rewind start models, to start engine place ignition key in ignition switch and turn it clockwise to (RUN).

On electric start models, turn key to (START) position, and when engine starts, release ignition key. If engine fails to start on first attempt, turn ignition key (OFF), wait a few minutes and try again. Best starter life is obtained by using short starting cycles.

IMPORTANT: DO NOT operate starter motor more than 15 seconds per minute, as overheating and damage can occur.

After engine has started, allow it to warm up before applying load.

Turn ignition key counterclockwise to (OFF) to stop engine.

Brake Pedal

CAUTION: Test your brakes prior to each days usage of unit. To test, fully depress Clutch Pedal and engage Parking Brake latch. Release Parking Brake latch by one latch tooth. Roll unit on level surface by hand, if brake does not drag, adjust brake according to instructions in Adjustments Section of this manual.

When Brake Pedal is depressed (with clutch pedal partially depressed), brake band on brake drum hub stops riding mower.

Depress Brake Pedal, to keep riding mower from rolling backward down a slope, when releasing clutch.

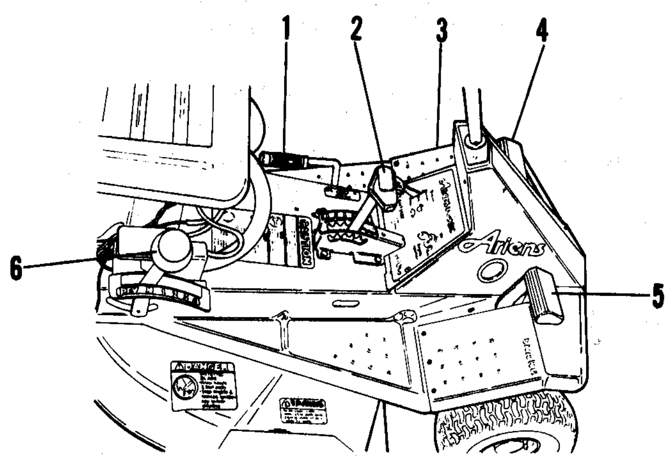
CAUTION: Brake will not stop riding mower under power without depressing Clutch Pedal. To stop riding mower in emergency situations, fully depress both clutch and brake pedals.

Clutch Pedal

When Clutch Pedal is depressed, transmission is disengaged from engine, permitting shifting from neutral (N) to desired direction of travel. With Speed Selector in 1st or 2nd speed, release Clutch Pedal slowly for smooth acceleration and remove foot from pedal.

IMPORTANT: Do not leave foot on pedal during operation as disc slippage may occur.

When unit is in motion, use of Clutch Pedal is not required when shifting between forward travel speeds.



1. **Mower Clutch Lever**
2. **Mower Height Lever**
3. **Parking Brake Latch**
4. **Clutch Pedal**
5. **Brake Pedal**
6. **Speed Selector**

Figure 4: Operating Controls

Depressing Clutch Pedal beyond clutching point will activate brake.

CAUTION: If unit rolls backward down a hill or slope, with Speed Selector in forward speed, use brake to stop. DO NOT release clutch pedal until unit has stopped rolling and Speed Selector has been moved to 1st or 2nd speed.

Speed Selector

Speed Selector lever is used to select neutral (N) or travel speeds that provide four forward and one reverse speed. These speeds are shown on Speed Selector quadrant. First (1) speed is slowest, (4) indicates fastest speed, (R) indicates reverse and (N) indicates neutral position.

To start engine, Speed Selector lever must be in neutral (N).

Ariens recommends starting forward travel in first (1) or second (2) speed, then shifting "on-the-go" to desired travel speed.

Parking Brake

CAUTION: Before leaving operators position, engage parking Brake and Latch.

Parking Brake is provided to prevent riding mower from rolling when parked or left unattended.

To engage Parking Brake, fully depress Clutch Pedal and engage Parking Brake Latch, by pushing latch forward, then remove pressure from Clutch Pedal. To disengage Parking Brake, depress Clutch Pedal and pull latch to rear.

Mower Clutch

Move Mower Clutch Lever forward to (IN) position to start mower blade rotation. Pull lever to rear (OUT) position to automatically apply blade brake and stop blade rotation.

If resistance is not felt when moving Mower Clutch lever over center by hand, adjust per instructions in Adjustments section of this manual.

Mower Height Control

Depress plunger and move Mower Height Control to rear to position mower at its maximum cutting height (3-1/2") and release plunger to lock in position. Depress plunger and move lever forward to position mower at its lowest cutting height (1-1/2") and release plunger to lock in position. Intermediate positions allow selection of cutting heights between these values.

STOPPING

To stop, depress Clutch and Brake Pedal, disengage Mower Clutch lever (OUT) lower mower pan, and engage Parking Brake.

Turn Ignition Key counterclockwise to stop engine.

CAUTION: Remove Ignition Key to prevent accidental starting or unauthorized use of riding mower.

NOTE: This product is equipped with an internal combustion engine. DO NOT use on or near any unimproved, forest covered or brush covered land unless the exhaust system is equipped with a spark arrester meeting applicable local, state or federal laws. A spark arrester, if used, must be maintained in effective working order by the operator. See your Ariens Dealer or engine manufacturer's service center.

Operating Tips

The following tips will help you to mow safely, achieve maximum performance from your riding mower and maintain the appearance of your lawn.

Be sure your mower blade is sharp. A dull blade will tear grass blades. (This usually results in a white cast over a freshly cut lawn. Later, tips of grass blades will turn brown.)

A new lawn has much softer blades of grass and has a higher moisture content. It is important for this type of lawn to be cut with sharp blades.

Cutting height will vary with different types of grass, climate, and individual preference.

When first using your riding mower, cut grass a little longer than you did with narrower cutting units until you are sure that a greater cutting width will not cause scalping due to irregularities in lawn.

Generally, grass should be cut about 1-1/2" long in spring, and not less than 2" long in hot summer weather.

If grass is high, or if it contains a high degree of moisture, cut it first with mower pan set high and then cut it with mower pan set lower. This gives better distribution of clippings and provides a clean second cut.

Height of cut should not be set too low on thick, lush lawns. Such grass, if cut too short, may die. This also applies to springy, heavy growth lawns. If blade is set too low, mower pan will drag on grass and restrict air flow thus reducing discharge of grass clippings.

WARNING: NEVER attempt to clear riding mower pan or discharge while engine is running. Disengage Mower Clutch lever (OUT), stop engine, remove key, wait for moving parts to stop before attempting to clear away any obstruction.

Grass should be cut when it is dry; not when it is wet from dew, rain or from watering. When wet, grass tends to pack inside mower pan and will not discharge properly, especially if height of cut is set too low.

CAUTION: Stay alert for holes, rocks, roots and hidden hazards in area of operation. Exercise extreme caution when operating on or crossing gravel drives, walks or roads. Stay alert for traffic.

To insure most complete and even cut, overlap each swath.

Plan your cutting so that you always trim with the left side of mower pan.

Following the same pattern each time you mow your lawn can develop ridges at right angles to direction of mowing. By changing direction of mowing (when possible) you can prevent this.

Turn clockwise (right turn) when beginning to mow large, open areas. This discharges clippings away from borderline objects (sidewalks, driveways, fences, etc.). After making a clockwise pass, mow in a counterclockwise (left turn) direction. This discharges clippings evenly over cut grass. Continuous clockwise mowing will cause a build up of clippings, preventing a uniform cut.

Slow down when making turns. Short, fast turns can cause; scuffing (outside front tire slides and pulls out grass), step type cutting or some grass may not be cut.

When mowing, regulate forward travel speed with Speed Selector and always operate engine at full throttle. This maintains proper blade speed and air flow to facilitate discharging of clippings. Mowing with a lower throttle setting causes blade to tear grass, resulting in poor lawn appearance.

A good fertilization program and frequent watering will help keep your lawn weed free and green all year long. Due to variations in climate, soil and grass varieties, contact your local garden supply dealer, park or golf course superintendent, or county agent to obtain specific information pertaining to your area.

NOTE: Be sure to clean mower pan after each use. Do not allow grass clumps or a coating of grass and debris to collect inside of mower pan. Avoid operation over bare ground intermittent with grass cutting as this causes dirt and grass to collect and cake under pan surface.

Lubrication and Maintenance

Ariens dealers will provide any service which may be required to keep your riding mower operating at peak efficiency. Should engine repair or service be required, it can be obtained from an Ariens dealer or an authorized engine manufacturer's service center.

WARNING: Stop engine, remove key and wait for moving parts to stop before attempting any lubrication or maintenance procedures.

CAUTION: DO NOT touch engine or riding mower parts which are hot from operation. Allow such parts to cool before servicing unit.

General

For ease of access to bottom of unit during lubrication and maintenance procedures, your riding mower may be driven up on ramps or tipped up onto bagger attachment service bar and braced securely. (For units without a bagger attachment, a service bar package is available through your Ariens Dealer.)

CAUTION: DO NOT tip unit up onto service bar without draining enough gasoline from tank to avoid spilling gasoline. On electric start models, remove battery to prevent spillage of electrolyte.

IMPORTANT: When unit is tipped up onto its rear end, undrained gasoline, drawn into cylinder may wash cylinder wall and shorten engine life. If cylinder wall becomes washed with gasoline, remove spark plug, put one teaspoon of oil in cylinder, turn engine over a few times and replace spark plug.

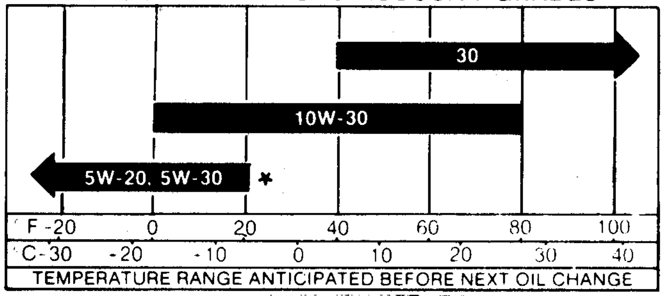
WARNING: Gasoline is highly flammable and must be handled with care.

ENGINE OIL

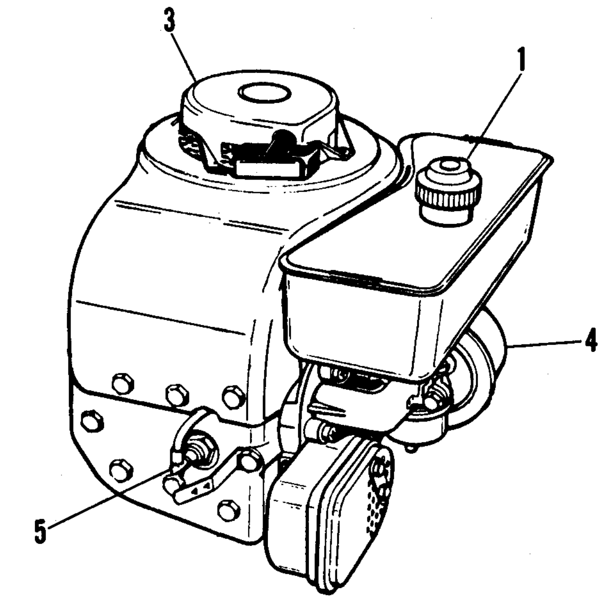
Use a high quality oil classified for Service SF, SE, SD or SC. These oils keep engine cleaner and retard formation of gum and varnish deposits. DO NOT add anything to recommended oil.

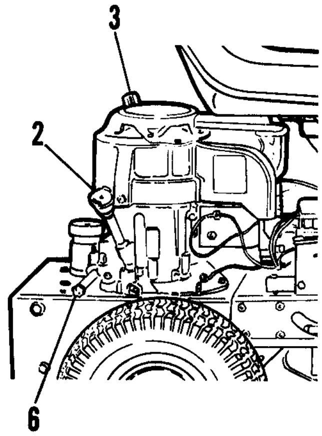
Refer to chart for recommended viscosity grades to use with temperature range anticipated before next oil change.

RECOMMENDED SAE VISCOSITY GRADES



* If not available, a synthetic oil may be used having 5W-20 or 5W-30 viscosity.





1. **Fuel Fill Cap**
2. **Dipstick and Oil Fill**
3. **Rewind Starter**
4. **Air Cleaner**
5. **Spark Plug and Wire**
6. **Oil Drain**

Figure 5: Engine

Lubrication and Maintenance Schedule

Hours of Operation/ Time Interval	Service Required
Every 5 Hours Or Daily	Check Engine Crankcase Oil
Every 10 Hours	Oil bell crank and pivot points.
Every 25 Hours	*Service Engine Air Cleaner *Change Engine Crankcase Oil Service Battery Check Tire Pressure Grease Steering System and Front Axle Spindles Left Rear Axle Carrier Shaft Friction Wheel Hub Clutch Brake Arm
Every 100 Hours Or Annually	Check Spark Plugs *Clean or Replace Air Filter Cartridge *Clean Engine Cooling Fins

*Under extremely dusty dirty conditions it may be necessary to service more often.

Checking

The engine crankcase oil should be checked daily or every 5 hours of operation.

To check oil, park riding mower on a flat level surface, stop engine, and wipe all debris from around dipstick cap.

Turn cap, remove dipstick from engine and wipe oil off dipstick. Insert dipstick into fill hole and turn slowly until cap bottoms firmly. Remove dipstick and observe oil level. If low, add clean fresh oil (of same type and viscosity as is in engine) to bring oil level to full (F) mark. Replace dipstick being sure to tighten cap firmly.

IMPORTANT: DO NOT over fill. Level must not exceed full (F) mark. Oil level MUST be maintained in safe operating range on dipstick at all times or engine damage will result.

Changing

IMPORTANT: Change oil after first 2 hours of operation, thereafter change oil every 25 hours of operation (more often in dusty, dirty conditions). See chart for proper type and viscosity.

NOTE: Run engine just prior to changing oil. Oil will flow more freely and carry away more contamination when warm.

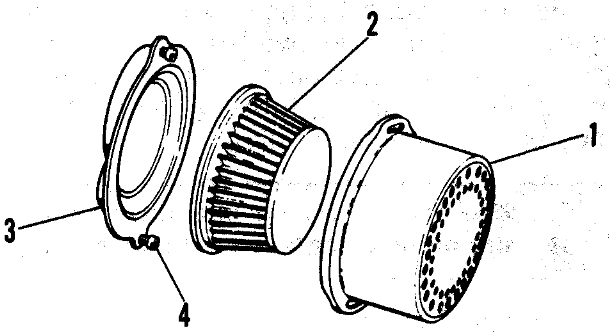
Drain engine crankcase by removing oil drain plug. After oil has drained replace plug.

Remove oil fill cap with dipstick and pouring slowly, add oil to crankcase to full mark on dipstick (approximately 27 ounces - 1-3/4 pints) of oil. Check oil level with dipstick being sure that you replace dipstick and tighten cap firmly.

Air Cleaner

IMPORTANT: DO NOT run engine with air cleaner removed. Operating engine with an extremely dirty air cleaner for only a brief period of time can cause engine damage.

Inspect air cleaner every twenty-five (25) operating hours. (More often if unit is used under extremely dirty or dusty conditions.)



1. **Cover**
2. **Filter**
3. **Base**
4. **Cover Retaining Screws**

Figure 6: Air Cleaner

Remove the air cleaner cover by loosening screws and turning cover counterclockwise and remove it from base.

DO NOT attempt to clean or oil filter; replace filter if it is dirty.

Clean inside of cover and base thoroughly. Install filter, cover and secure.

Engine Cooling

The engine is air cooled. Air must circulate freely around engine from air intake screen, over cooling fins on cylinder head and block to prevent overheating.

Every 100 operating hours or yearly (more often if conditions require) remove blower housing and clean cooling fins. Also clean external surfaces of your engine of dust, dirt and oil deposits which can contribute to improper cooling.

IMPORTANT: DO NOT operate engine with blower housing removed - this will cause overheating and engine damage.

CAUTION: Periodically clean muffler and manifold areas to remove all grass, dirt and combustible debris. If engine muffler is equipped with spark arrester screen assembly, remove every 50 hours for cleaning and inspection. Replace if damaged.

Spark Plugs

Spark plugs should be cleaned or replaced (if necessary) and gap reset to .030" every 100 hours of operation or yearly whichever comes first.

To clean, remove spark plug from engine, scrape electrodes (DO NOT wire brush or sand blast).

NOTE: Sparking can occur if wire terminals do not fit firmly on spark plugs. Reform terminals if necessary.

Muffler

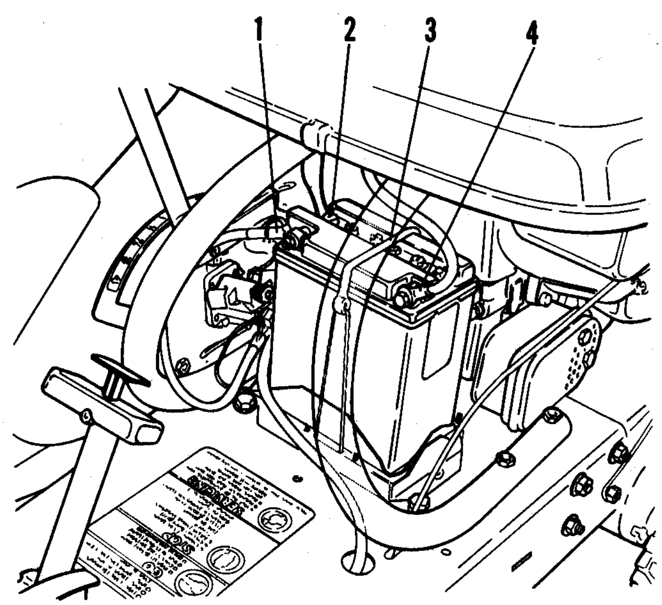
Worn out mufflers are more than just a noise nuisance and should be replaced immediately. Continued use could result in fire or explosion.

Battery (electric start models)

WARNING: Batteries produce explosive gases which can cause personal injury. DO NOT allow flames, sparks or any ignited object to come near battery. When charging or working near a battery, always shield your eyes and provide ventilation.

WARNING: Keep batteries out of reach of children. Batteries contain sulfuric acid. Avoid contact with skin, eyes or clothing. In case of acid contact with skin, eyes or clothing, flush immediately with water for a minimum of 15 minutes. If acid is swallowed, drink large quantities of milk or egg or vegetable oil. Call a physician immediately.

Every 25 hours or each week check electrolyte level of each cell by removing caps one at a time. The electrolyte level should be at level indicator. Use distilled water to fill each cell if needed. Install and tighten each cap after checking.



1. **Positive (+) Cable**
2. **Filler Caps**
3. **Strap and Hooks**
4. **Negative (-) Cable**

Figure 7: Battery

IMPORTANT: When distilled water is added to battery during freezing weather, it must be charged to mix water with electrolyte or water will remain at top and freeze.

Keep battery and its terminals clean and inspect monthly to be sure of obtaining best performance.

WARNING: DO NOT allow tools or other objects to come into contact with both terminals at same time. When removing battery from tractor, remove negative (-) cable first to reduce risk of sparks.

To clean terminals remove battery from riding mower by removing cables. Remove battery strap and hooks and lift battery out. Clean or service away from unit. Remove corrosion from battery terminals and cable connections with a wire brush, then wash with a weak baking soda solution.

After cleaning, apply a thin coat of grease or petroleum jelly to terminals and cable ends, to retard corrosion. Reinstall battery.

CAUTION: Connect positive (+) cable first, negative (-) cable last.

To charge battery remove battery from riding mower, remove vents and charge at a rate of 1.2 amps for 10 hours on a fully discharged battery. (Specific Gravity reading of 1260 plus or minus 5 points on all cells.)

IMPORTANT: DO NOT fast charge. Charging at a higher rate will damage or destroy battery.

WARNING: When charging battery, remove it from tractor and make certain that you connect positive (+) lead of charger to positive (+) terminal and negative (-) lead to negative (-) terminal. Reverse connections can cause sparks and potential unsafe conditions.

Seat

Clean seat regularly, using a vinyl cleaner (not solvent). Extreme temperatures can damage seat when left unprotected against weather. If seat should tear, apply vinyl repair tape to protect damaged area.

General Lubrication

IMPORTANT: Wipe each grease zerk fitting clean before and after lubrication. Keep grease and oil off belts, friction wheel and drive plate to avoid slippage and deterioration.

NOTE: Use Ariens Multi-Purpose Grease (Part Number 000150) or good grade of general purpose grease at zerk fittings and oil at lubrication points.

The steering system, front wheels, left rear wheel, carrier shaft, sliding fork, friction wheel hub clutch brake arm and linkage pivot points (shown below) should be lubricated every 25 hours of operation or twice each season whichever occurs first.

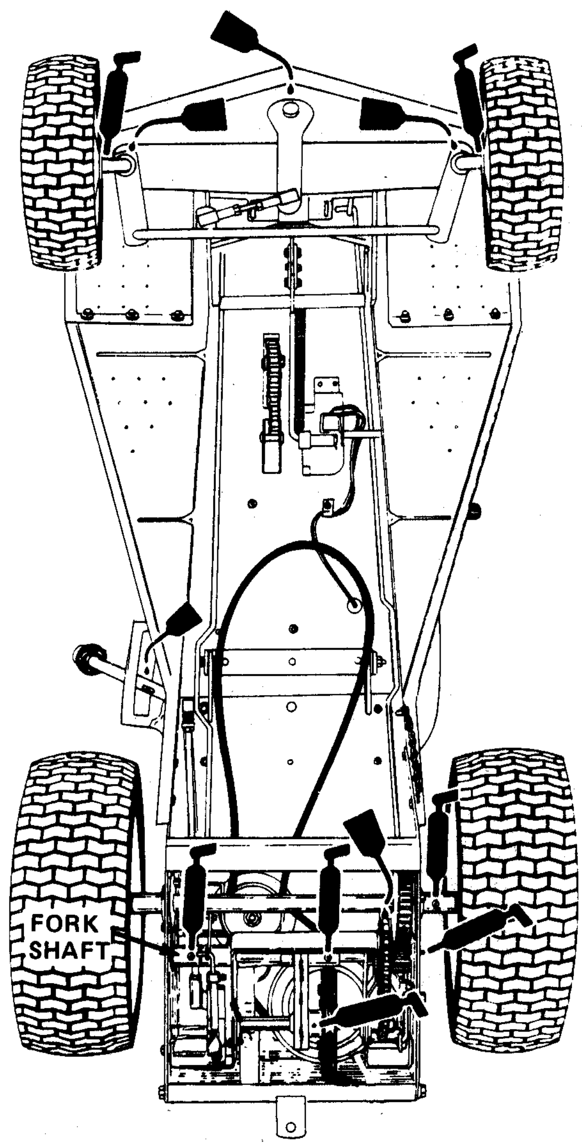


Figure 8: Lubrication Points

Mower Belt Replacement

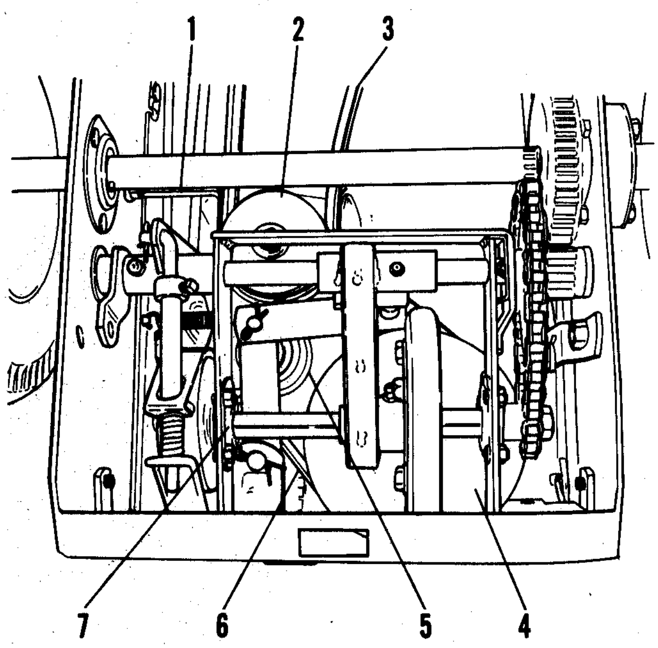
WARNING: Stop engine, remove key, wait for moving parts to stop and remove wire from spark plug before attempting to replace mower belt.

With Mower Clutch disengaged (OUT), place mower pan in its lowest cutting position.

Loosen two whizlock cap screws and slide adjustment bracket forward (this positions mower pan so that belt has least possible tension for removal or installation).

Remove belt from mower pulley (belt finger springs away).

Remove belt finger from engine pulley. (Moving Speed Selector provides access to cap screws and nuts.)



1. **Mower Belt Finger**
2. **Engine Pulley**
3. **Mower Belt**
4. **Drive Plate**
5. **Idler**
6. **Drive Belt**
7. **Hex Shaft**

Figure 9: Belt Replacement

Remove old belt and place new belt in position on engine pulley first then on mower pulley.

Replace belt finger at engine pulley with 1/8" clearance between belt and finger.

Adjust belt according to instructions in Adjustments Section of this manual.

Drive Belt Replacement

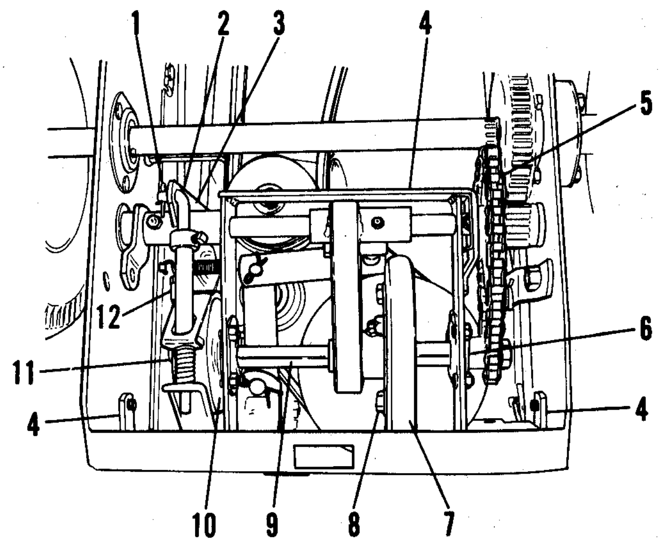
With Speed Selector in neutral "N", move idler toward drive disk and remove belt from idler.

Remove belt from drive disk and then engine pulley.

While turning hex shaft with wrench, pull belt toward front of machine between drive disk and friction wheel.

Install new belt in reverse order around engine pulley, drive disk and idler with belt properly seated in grooves.

Friction Wheel Replacement



1. **Cotter Pin**
2. **Brake Rod**
3. **Brake Bellcrank**
4. **Carrier**
5. **Roller Chain**
6. **Bearing Flange**
7. **Friction Wheel**
8. **Cap Screws**
9. **Hex Shaft**
10. **Brake Drum**
11. **Hex Shaft Lock Nut**
12. **Ball Joint**

Figure 10: Friction Wheel Replacement

With Speed Selector in neutral "N", remove five cap screws holding friction wheel to hub. (If necessary, use a 5/8" wrench on brake drum end of hex shaft to keep friction wheel from rotating.)

Remove cap screw and lock washer that secures ball joint to sliding fork and remove ball joint from fork.

Remove cotter pin from brake rod and rod from clutch brake bellcrank.

Remove master link from roller chain.

Remove two cap screws that secure carrier bracket to frame, rotate lower end of carrier out of frame and tie or brace it up.

Remove lock nut securing brake drum to hex shaft. (Use a 5/8" wrench on brake drum end of hex shaft to keep it from rotating.) Remove brake drum and key from shaft.

On sprocket end of hex shaft, remove four lock nuts that secure bearing flanges to frame.

Pull hex shaft from sprocket end far enough to remove friction wheel and hub.

Install new friction wheel in reverse order being sure that all hardware is tightened securely.

CAUTION: After installation of new friction wheel, check neutral setting, clutch and brake adjustment per instructions in Adjustments section of this manual.

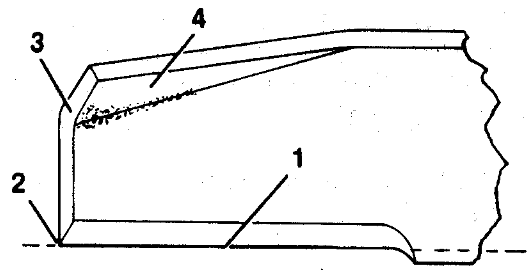
Mower Blade

CAUTION: Use sturdy gloves or padding to protect hands when working with mower blades.

Regularly check mower blades (vanes if used) for wear and that lock washer is fully compressed by nut (requires 50-60 ft. lbs of torque on nuts).

WARNING: Stop engine, remove key, wait for moving parts to stop and remove wire from spark plug before attempting any maintenance procedures.

CAUTION: Wear of mower blade will cause structural weakness. DO NOT install new or replacement vanes on worn blades.



1. **Cutting Edge**
2. **Square Corner**
3. **Air Lift Erosion**
4. **Air Lift**

Figure 11: Mower Blade

When blade needs sharpening, block blade to prevent rotation, remove nut, lock washer and blade from shaft.

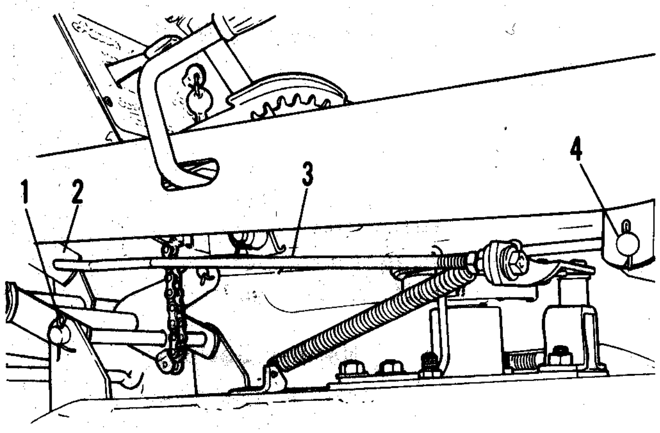
Sharpen both ends of blade at original angle (25 degrees), removing equal amounts of material from each end to maintain proper blade balance. New blades are balanced to within 1.3 inch ounces at factory, DO NOT grind around corner at tip of blade. If cutting edge of blade cannot be sharpened in a straight line to within 1/8 of an inch of its end, replace blade with Ariens replacement blade only. Blades are available through your Ariens Dealer.

Install blade, lock washer and tighten nut until lock washer is fully compressed (requires 50-60 ft. lbs. of torque on nuts).

IMPORTANT: If mower is used under sandy soil conditions, replace blades when air lifts become eroded through at end.

Mower Pan Removal

CAUTION: When adjusting, replacing or moving mower blade or mower belt, remove key from key switch and disconnect spark plug wire from spark plug to prevent accidental starting.



1. **Hanger Pin**
2. **Mower Clutch Lever**
3. **Brake Rod**
4. **Rear Hanger Rod**

Figure 12: Mower Pan Removal

Remove rear belt finger and mower belt from engine pulley (refer to Mower Belt).

Position mower on flat level surface. Lower mower pan with Height Control lever. (Lowering mower pan down on blocks will relieve weight on linkage and make removal of rods and pins easier.)

Remove cotter pin and rear hanger rod from swivel bracket to disconnect rear of mower pan.

Remove cotter pin from brake rod and rod from mower clutch lever.

Remove cotter pin and hanger pin from height bracket.

Remove mower pan from rider.

Install mower pan on rider in reverse order.

Tire Pressure

NOTE: Keep tires properly inflated to 12 psi at all times. Use a low pressure tire gauge for accurate pressure readings.

Check tire pressure at least once a month. Over inflation may cause operator discomfort and excessive tire tracks on lawns or soft surfaces, while under inflation causes short tire life.

NOTE: After checking and or inflating, replace and tighten valve caps to prevent air loss.

Ariens Company recommends that you have adjustments made by your Ariens dealer. He has tools and the know how to properly perform adjustments which may be required to keep your riding mower operating at peak efficiency. Should you decide to make the following adjustments on your riding mower yourself, Ariens Company recommends that you call your dealer for answers to any questions that might arise.

For ease of access to bottom of unit during lubrication and maintenance procedures, your riding mower may be driven up on ramps or tipped up onto bagger attachment service bar and braced securely. (For units without a bagger attachment, a service bar package is available through your Ariens Dealer.)

CAUTION: Refer to instructions in beginning of Lubrication and Maintenance Section when tipping riding mower.

WARNING: Stop engine, remove key, wait for moving parts to stop and remove wire from spark plug before attempting any adjustment procedures.

CAUTION: DO NOT touch engine or riding mower parts which are hot from operation. Allow such parts to cool before servicing unit.

Seat

Adjust seat to suit operator by loosening cap screw under seat, sliding seat to a safe comfortable operating position with operators feet on footrest, and tighten cap screw.

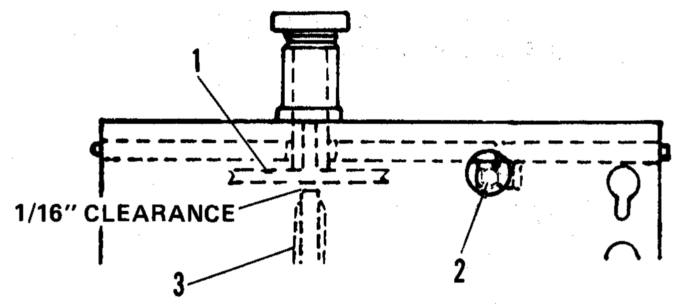
NOTE: Operating unit with feet on mower pan, besides being dangerous, will keep pan from floating and will result in uneven cut.

Neutral Setting

With Speed Selector in neutral (N) and clutch pedal released, there must be 1/16" clearance between friction wheel and drive plate.

NOTE: Rotate friction wheel when checking for 1/16" clearance between drive disk and friction wheel.

To adjust, turn adjustment screw (accessable through hole in rear frame) to obtain proper clearance. After adjusting neutral setting, adjust Rider Brake according to following instructions.

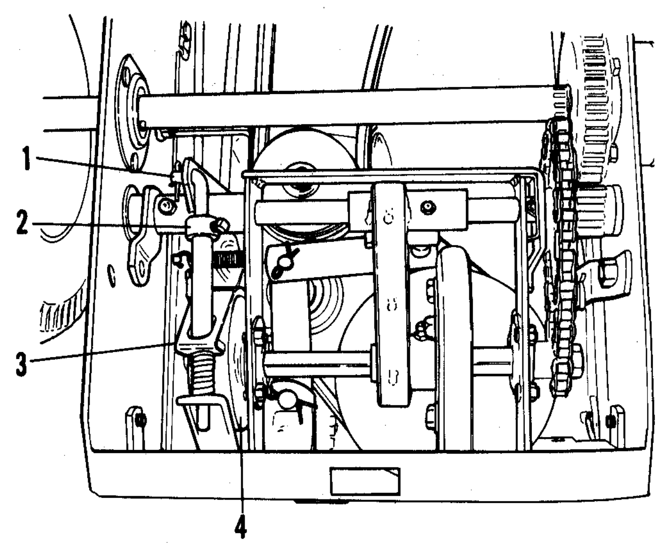


1. **Drive Disk**
2. **Adjustment Screw**
3. **Friction Wheel**

Figure 13: Neutral Setting

Rider Brake

Clutch and brake adjustments are dependent upon each other. With Speed Selector in any forward speed, depress clutch pedal until friction wheel just clears drive disk. (Clutch Pedal can be held in this position with Parking Brake latch.)



1. **Brake Rod**
2. **Brake Set Collar**
3. **Brake Band**
4. **Brake Drum**

Figure 14: Rider Brake

Check brake by turning both wheels at the same time, brake should just begin to drag on brake drum. If not, adjust brake band by loosening set screw on brake set collar and moving collar on brake rod.

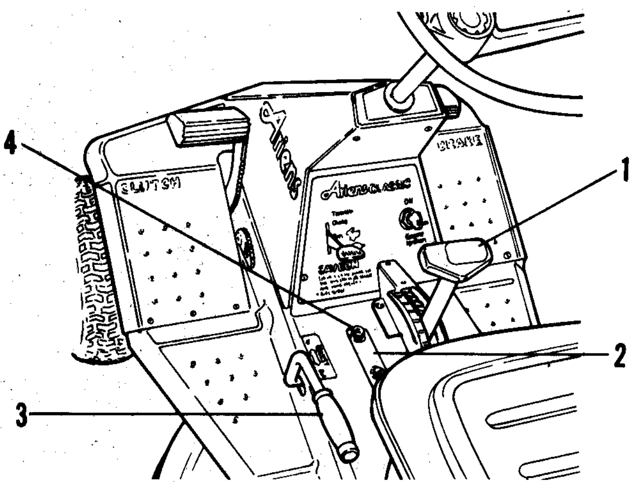
Release Parking Brake latch and turn both rear wheels by hand, they should rotate freely in neutral (N) but not rotate with Speed Selector in any other position.

Test by fully depressing Clutch Pedal and trying to turn both wheels by hand, they should not turn.

Mower Belt

IMPORTANT: Ariens Company recommends that mower belt be adjusted after first five hours of operation.

With Mower Clutch engaged (IN) and Height Control lever set in the most used cutting height position, belt is properly adjusted when it can be squeezed together by hand in front of rear wheels between 3/4" to 1-1/4" without moving mower pan.



1. **Mower Height Lever**
2. **Adjustment Bracket**
3. **Mower Clutch Lever**
4. **Whizlock Cap Screws**

Figure 15: Mower Belt

To check, squeeze belt together in front of rear wheels and measure distance across flats (outside surfaces) of belt. Measurement should be between 1-7/8" and 2-3/8".

IMPORTANT: Over tightening belt will result in permature belt and bearing wear.

To adjust, with Mower Clutch disengaged (OUT) and Height Control lever in normal mowing height position, loosen cap screws on adjustment bracket and slide bracket forward to loosen belt (if belt is too tight) or to rear to tighten belt (if belt is loose). Tighten cap screws and recheck belt adjustment.

Check mower brake adjustment after changing mower belt and/or clutch adjustment.

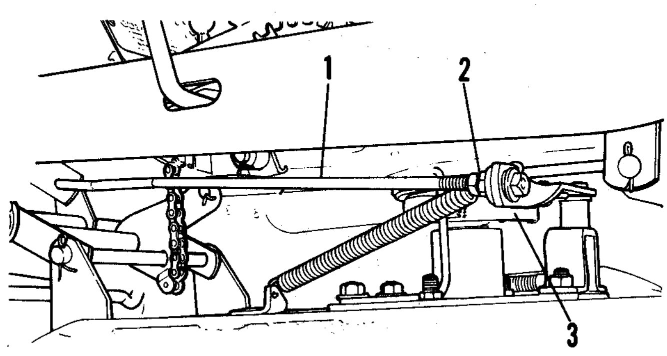
Mower Brake

WARNING: With improper use, injury may result if Mower Clutch in disengaged (OUT) and brake does not stop mower blade within 5 seconds.

Mower brake is applied when mower clutch is disengaged (OUT) and must release when mower clutch is engaged (IN).

To check, position mower pan in mid-height position and while observing brake, engage and disengage mower clutch. Brake rod must push brake away from pulley when Mower Clutch is engaged (IN) and allow brake to be applied when Mower Clutch in disengaged (OUT).

If brake is applied when Mower Clutch is engaged, lower pan, loosen locking nut and turn adjustment nut toward brake arm until brake is released, recheck per above instructions until adjustment is correct and tighten locking nut.



1. Brake Rod 2. Locking Nuts 3. Brake Band

Figure 16: Mower Brake

Storage

Your authorized Ariens Dealer is trained and equipped to service your equipment. A periodic check up by your dealer will help reduce your maintenance costs.

Inspect unit for visible signs of wear, breakage or damage. Order any parts required and make necessary repairs to avoid delays when beginning use again.

Lubricate unit according to instructions in Lubrication and Maintenance Section of this manual.

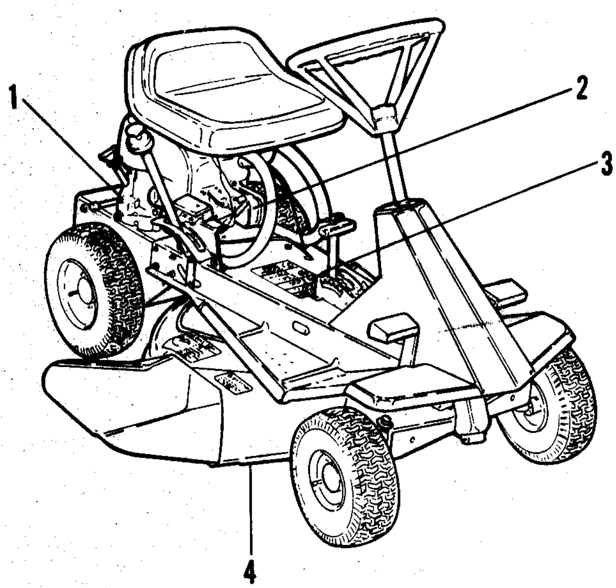
Clean unit thoroughly. Touch up all painted areas to avoid rust and store in a cool, dry protected place.

User Service Components

Publications are available for riding mower owners who wish to perform some of their own maintenance and service operations. Should a complete parts and/or repair manual be desired, use the convenient order form supplied with your warranty registration or order by machine model and serial number.

Mail Requests to: **Ariens Service**
655 West Ryan Street
Brillion, WI 54110-1098

Components illustrated and described in this manual are most commonly used for consumer service and can be ordered through your Ariens Dealer. When ordering parts always include the Model and Serial Number of your unit to assure prompt service.



1. **Drive Belt**
2. **Battery**
3. **Mower Belt**
4. **Mower Blade**

Figure 17: User Service Components

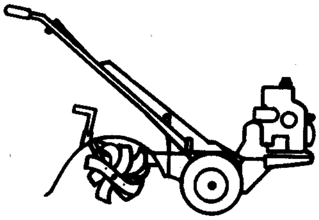
Attachments

812004 Rear Grass Catcher

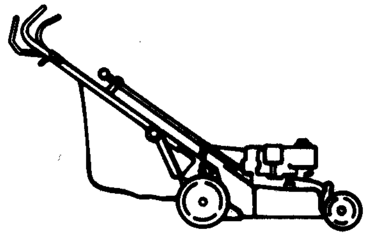
Accessories

712006	**Front Weight**
512021	**Service Bar Package**

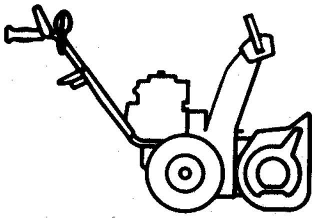
Ask your dealer for information about these other fine Ariens products:



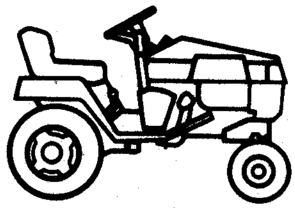
Garden Tillers



Walk Behind Lawn Mowers



Walk Behind Sno-Thro



Yard and Garden Tractors

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